

## **SECTION 8.0 – MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM**

As the Lead Agency under the CEQA, the CSLC is required to adopt a program for reporting or monitoring regarding the implementation of mitigation measures for this project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this EIR. This Lead Agency responsibility originates in Public Resources Code Section 21081.6(a) (Findings), and CEQA Guidelines Sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

### **MONITORING AUTHORITY**

The purpose of a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMCRP can be a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance and reporting activities of the CSLC and any monitors it may designate.

The CSLC may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as OSPR. The number of monitors assigned to the project will depend on the number of concurrent mitigation measure requirements. The CSLC or its designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires the approval of the CSLC must allow at least 60 days for adequate review time. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to each spread to ensure that appropriate agency reviews and approvals are obtained.

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. Any deviation and its correction shall be reported immediately to the CSLC or its designee by the environmental monitor assigned to the project.

### **ENFORCEMENT RESPONSIBILITY**

The CSLC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to the project. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC or its designee.

## **MITIGATION COMPLIANCE RESPONSIBILITY**

Shore Terminals, LLC is responsible for successfully implementing all the mitigation measures in the MMCRP, and is responsible for assuring that these requirements are met whether by Shore staff or vessel operators. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria with documentation. Additional mitigation success thresholds could be established by applicable agencies with jurisdiction through any later permit processes and through the review and approval of specific plans for the implementation of mitigation measures, such as future improvement to Shore upland facilities that indirectly affect operation of the marine terminal.

## **GENERAL MONITORING PROCEDURES**

**Environmental Monitors.** The CSLC and the environmental monitor(s) are responsible for overseeing that the mitigation monitoring procedures are adhered to in accordance with time specifications, if given. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

**General Reporting Procedures.** Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor assigned to the project. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

**Public Access to Records.** The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

## **MITIGATION MONITORING TABLE**

The following sections present the mitigation monitoring tables for the project. Each table lists the following information, by column:

- Impact (impact number, title, and impact class).
- Mitigation Measure (title only; full text of the measure is presented in Section 3.0).
- Monitoring/reporting action (the action to be taken by the monitor or Lead Agency).
- Effectiveness criteria (how the agency can know if the measure is effective).
- Responsible agency.
- Timing (before, during, or after construction; during operation, etc.).

**Table 8-1**  
**Operational Safety/Risk of Upset**

Impact	Mitigation Measure	Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>OS-3:</b> Shore's response capability for containment of spills during transfer operations would be adverse and significant for spills greater than 50 bbls, and range from spills that can be contained during first response efforts with rapid cleanup (Class II), to those complex spills that result in a significant impact (Class I) with residual effects after mitigation.	OS-3a: Provide quick release devices that would allow a vessel to leave the wharf as quickly as possible in the event of an emergency (fire or accident that could lead to a spill) that could impact the wharf or the vessel.  OS-3b: Install tension monitoring devices on the wharf that would avoid excess strain on mooring lines and avoid damage that could result in spills.  OS-3c: Install Allision Avoidance System (AAS) at the terminal to prevent damage to the pier and/or vessel during docking operations.  OS-3d: Develop a comprehensive preventative maintenance program for the wharf that includes periodic inspection of all components related to transfer operations. The program shall be subject to review and approval by the CSLC.	CSLC monitor to observe devices after installation.	Reduces potential for damages and spills. In the event of an emergency, the wharf will able to quickly release a vessel to prevent spread of oil.	CSLC	Within 12 months of lease implementation.
<b>OS-4:</b> Spills from the terminal during non-transfer periods would be associated with pipelines and are considered a significant (Class II) impact if spills are less than 50 bbls, or significant (Class I) impacts for spills greater than 50 bbls.	OS-4: Implement measure OS-3d. (See also GEO-11.)	See OS-3d.	See OS-3d.	See OS-3d.	See OS-3d.
<b>OS-5:</b> Shore Terminals Wharf Operations Manual requires minor revisions to become current.	OS-5: Shore Terminals shall update and bring the Wharf Operations Manual current. Revise the manual by providing current names of responsible persons at the terminal and the names of the current response contractors. Submit the Manual to the CSLC for review and approval within 6 months of lease implementation.	Shore to update Wharf Operations Manual to current. Submit for USCG and CSLC review.	Assures that correct and current information is contained in the manual	CSLC and USCG	Submit for review and approval within 6 months of lease implementation.

**Table 8-1 (Continued)**  
**Operational Safety/Risk of Upset**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-6: Public areas are beyond the hazard footprint boundary, thus fires and explosions would not cause a public safety risk. However, the wharf Operations Manual does not address fire emergency procedures and the wharf does not meet detection/suppression system requirements.	OS-6a: Shore shall implement mitigation measure OS-3a to provide for quick release devices that would allow a vessel to depart the wharf quickly would help in the event of a fire. OS-6b: Shore Terminals shall develop a set of procedures for dealing with tank vessel fires and explosions for tankers berthed at the Shore terminal. The procedures should include the steps to follow in the event of a tank vessel fire and describe how Shore and the vessel will coordinate activities. The procedures shall also identify other capabilities that can be procured if necessary in the event of a major incident.	See OS-3a.	See OS-3a.	See OS-3a.	See OS-3a.
	OS-6c: Shore Terminals shall ensure that the proposed MOTEMS, Section 8.0, fire detection/suppression system conforms to the proposed MOTEMS, Section 8.0.	Shore shall prepare and submit procedures to CSLC for review and approval.	Provides planning and procedures for emergency response.	CSLC	Submit to CSLC within 6 months of lease implementation.
OS-8: Spills from accidents in the Bay could result in impacts to water quality or biological resources that could be significant adverse (Class II) impacts for those that can be contained during first response efforts; or significant adverse (Class I) impacts that would have residual impacts. While Shore does not have legal responsibility for tankers, it does have responsibility to participate in improving general response capabilities.	OS-8a: As a lease condition, Shore shall agree to participate in an analysis to determine the adequacy of the existing VTS in the Bay Area, if such a study is conducted by a federal, state, or local agency during the life of the lease. Agencies such as the San Francisco Bay Harbor Safety Committee often conduct studies of safety issues within the Bay Area. As vessel traffic increases in and around the Bay Area and as technology improves, it may be necessary and feasible to upgrade and expand the VTS in and around the Bay Area. Shore shall participate in this analysis and contribute a pro-rata share toward the upgrade and expansion of the system, if required to do so by the CSLC.	Shore to review system and make necessary corrections. Monitor to observe devices after installation.	Reduces the risk of fire by providing necessary fire detection/suppression systems.	CSLC	Submit to CSLC within 6 months of lease implementation.
	OS-8b: As a lease condition, Shore shall agree to respond to the spill as if it were its own, without assuming liability, until such time as the vessel's response organization can take over management of the response actions in a coordinated manner.	This shall be implemented as a lease condition. Shore shall demonstrate to CSLC their participation in program strategies to protect sensitive resources.	Reduces potential damage to resources.	CSLC	Life of lease.

**Table 8-2**  
**Water Quality**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>WQ-2:</b> Discharge of ballast water that contains harmful microorganisms could impair several of the project area's beneficial uses, including commercial and sport fishing, estuarine habitat, fish migration, preservation of rare and endangered species, water contact recreation, non-contact water recreation, fish spawning, and wildlife habitat.	WQ-2: Shore shall ensure that any vessel using its terminal comply with the California Marine Invasive Species Control Act (Public Resources Code Sections 71200 through 71271). Vessels must exchange their ballast water in mid-ocean waters, before entering the waters of the state or they must retain all ballast water on board the vessel (Public Resources Code Section 71204.2). Vessels that have not complied with the Act shall not be allowed to moor at the terminal.	Shore shall complete a ballast water reporting form for each vessel using the terminal and fax it to the Ballast Water Program within 24 hours. This reporting form shall state the ballast water source and where the vessel discharged ballast water. Shore Terminals and CSLC staff shall meet annually every March throughout the lease term, discuss the effectiveness of this mitigation measure, and make adjustments to the implementation of this measure.	Shore Terminals shall adhere to the current "Ballast Water Management for Control of Nonindigenous Species" as a part of Public Resources Code Section 71200 until January 1, 2010 or any date extension thereof. This measure will provide a tracking mechanism and shall remain in effect until such time that more stringent requirements are developed.	CSLC	Life of lease
<b>WQ-3:</b> Spills sanitary wastewater, bilge water and non-segregated ballast water could have the potential to degrade water quality.	WQ-3: Shore shall prepare a SWPPP for the marine terminal. The SWPPP shall include Best Management practices (BMPs), specifically to prevent leaks and spills during transfer of liquids between vessels and trucks on the wharf.	Shore shall prepare a SWPPP for CSLC review and approval.	Aggressive implementation of BMPs to reduce the input of chemicals to the Bay from operations on the wharf would reduce the Shore's input of these chemicals.	CSLC	Prepare SWPPP within 6 months of lease implementation. Maintain SWPPP, update as necessary for life of lease.
<b>WQ-5:</b> Marine anti-fouling paints are highly toxic containing copper, sodium, zinc, and tributyltin (TBT) and their use on vessels associated with the Shore terminal is considered significant.	WQ-5: Shore Terminals shall require that vessel operators document that vessels using the marine terminal have had no new applications of TBT or other metal-based anti-fouling paints applied after January 1, 2003. Beginning in 2008 Shore Terminals shall require deny moorage to vessels mooring at its dock without prior proof of compliance with the IMO mandate prohibiting the presence of organotin-based biocides on ship hulls.	Shore shall require vessels to document that they have no new TBT applications (per IMO mandate). Documentation shall be kept at Shore, available for CSLC inspection.	Until all TBT is phased out by 2008, vessels with old applications of TBT on their hulls will visit Shore. Shore cannot feasibly require vessels to remove TBT from their hulls (until the IMO mandate is effective). Therefore, until all TBT is gone from vessels using the Shore marine terminal, impacts of organotins will remain.	CSLC	Life of lease.

**Table 8-2 (Continued)**  
**Water Quality**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WQ-6: Routine vessel maintenance would have the potential to degrade water quality due to chronic spills during transfers of lubricating oils.	WQ-6: Implement WQ-3 for preparation of a SWPPP.	See WQ-3.	See WQ-3.	See WQ-3.	See WQ-3.
WQ-7: Stormwater runoff from the Shore terminal may contribute pollutants to the Bay in concentrations that may adversely affect some benthic species within the local area.	WQ-7: Implement WQ-3, plus additional BMPs to reduce the input of chemicals to the Bay from the marine terminal, including (at a minimum) (1) conducting all vehicle maintenance on land not over water or marshland, (2) berthing all areas on the pier where maintenance activities are being conducted and cleaning up all spilled contaminants before berms are removed, (3) washing the surface of the pier to the extent practical and directing washwater into sumps, (4) maintenance of sumps, and (5) posting signs to educate all workers to the importance of keeping contaminants from entering the Bay.	These BMPs shall be detailed in a SWPPP that Shore shall prepared specifically for the marine terminal and submit to CSLC for approval.	Aggressive implementation of BMPs to reduce the input of chemicals to the Bay from operations on the wharf would reduce Shore's input of these chemicals.	CSLC	Prepare SWPPP within 12 months of lease implementation. Maintain SWPPP, update as necessary for life of lease.
WQ-9: Potential impacts on water quality can result from leaks or spills and result in significant adverse impacts.	WQ-9: Implement OS-3a through OS-3d (Operational Safety/Risk of Upset).	See OS-3a through OS-3d.	See OS-3a through OS-3d.	See OS-3a through OS-3d.	See OS-3a through OS-3d.
WQ-10: A significant impact to water quality could result from leaks or an accidental spill of crude oil or oil product from a vessel spill along tanker routes either in San Francisco Bay or outer coast waters.	WQ-10: Shore Terminals shall implement mitigation measures OS-8a and OS-8b of the Operational Safety/Risk of Upset Section addressing potential participation in VTS upgrade evaluations, and Shore response actions for spills at or near the terminal.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.

**Table 8-3**  
**Biological Resources**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>BIO-3:</b> Loss of juvenile Dungeness crabs and young Chinook salmon would be significant if dredging occurs when juveniles are migrating through the area.	BIO-3a: Shore shall schedule dredging to avoid the month of September when juvenile Dungeness crabs are most abundant in the project area.  BIO-3b: Shore shall schedule dredging in July and August when winter and spring run Chinook salmon smolt activity is lowest.	Shore shall coordinate with the CSLC and U.S. Army Corps of Engineers (Corps) who are the dredging permit holders on the scheduling of dredging operations.	Reduces potential impacts to juvenile Dungeness crabs.  Reduces potential impacts to Chinook salmon smolt.	CSLC	Prior to dredging.

**Table 8-3 (Continued)**  
**Biological Resources**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>BIO-6:</b> Oil spills could have significant adverse impacts on biological resources.  The resources at the most immediate risk of oiling from a spill at the Shore marine terminal are Suisun Shoal, Hastings Slough/Point, Edith/Seal Island, Bulls Head Marsh/Pacheco Creek, Martinez Marsh, and Benicia Marsh. Depending on conditions at the time of the spill, these areas could be contacted within 3 hours of a spill at the Shore marine terminal.	BIO-6a: Implement all the mitigation measures included in OS-3 through OS-6 in Operational Safety/Risk of Accidents to either lower the probability of an oil spill or increase response capability.  BIO-6b: Shore shall demonstrate to the satisfaction of the CSLC that Shore terminals can successfully implement its Oil Spill Response Plan and can deploy within 3 hours all the boom necessary to simultaneously protect all the sensitive resources at risk of contact with oil within 3 hours from a spill at terminal.	See OS-3 through OS-6.	See OS-3 through OS-6.	See OS-3 through OS-6.	See OS-3 through OS-6.
	BIO-6c: Shore shall identify a source of sonic hazing devices to scare birds away from Suisun Shoal and demonstrate to the CSLC that these devices can be deployed within 3 hours of a spill at terminal.	CSLC monitor to observe that Shore has sonic hazing devices.	Reduces potential damages to birds.	CSLC	Within 12 months of lease implementation.
	BIO-6d: Procedures should be developed for clean up of any sensitive biological areas contacted by oil. In many oil spills, clean up has done at least as much damage as the spill itself. Decisions about clean up of sensitive areas should be made in consultation with biologists from CDFG and USFWS.	Shore shall develop and present plan for clean up to CSLC, CDFG and USFWS.	Reduces potential damage from oil spills. For large spills, significant impacts may remain.	CSLC, CDFG, and USFWS	Within 12 months of lease implementation.
	BIO-6e: If damage occurs, the last resort is restoration and compensation. Any loss of resources shall be documented as soon as possible after a large spill. The sampling methods and design should be determined beforehand, and the plan should include provisions for getting resources onsite as soon as possible so that post-spill studies can begin immediately.	Shore shall provide sampling methods and a design protocol plan to CSLC for review and approval.  Shore shall provide documentation of damage as soon as possible after a large spill to CSLC, CDFG and USFWS.	This will ensure that the loss of resources is documented as soon as possible after a large spill event.	CSLC	Sampling methods and protocol within 12 months of lease implementation and update every 2 years.  Documentation of damage as soon as possible after a spill.

**Table 8-3 (Continued)**  
**Biological Resources**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
BIO-7: A significant impact to biological resources could result from spills of crude oil or product from a vessel in transit along tanker routes either in San Francisco Bay or outer coast waters.	BIO-7: Implement OS-8a and OS-8b of the Operational Safety/Risk of Upset section addressing potential participation in VTS upgrade evaluations, and Shore response actions for spills at or near the terminal.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.

**Table 8-4**  
**Commercial Fisheries**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>FSH-2:</b> Invasive species discharged from ballast water could impair water quality (Impact WQ-2) and biological resources (Impact BIO-4) would also impair commercial and sports fishing activities in the Bay and outer coast.	FSH-2: Implement WQ-2 for ballast water management.	See WQ-2.	See WQ-2.	See WQ-2.	See WQ-2.
<b>FSH-3:</b> Shore contributes incrementally to water quality contamination and thus fish contamination, which could result in a loss of fishing opportunities because anglers prefer to stay away from contaminated fishing areas.	FSH-3: Implement WQ-3 and WQ-7 for preparation of a SWPPP and additional BMP's.	See WQ-3 and WQ-7.	See WQ-3 and WQ-7.	See WQ-3 and WQ-7.	See WQ-3 and WQ-7.
<b>FSH-4:</b> Space use conflicts between transiting vessels serving the Shore marine terminal could occur if commercial shrimp trawlers operate 12 hours or more per day during the fishing season.	FSH-4: Shore Terminals shall notify the shrimp trawlers operating in Carquinez Strait of increases in vessel transits associated with terminal operations. In addition, Shore shall inform incoming vessel operators of shrimp trawling activities near the terminal.	Shore shall demonstrate to CSLC their activities by providing copies of notices.	Reduces Shore-bound vessels potential for conflict.	CSLC	Annual reporting for life of lease.
<b>FSH-5:</b> Space use conflicts between transiting vessels serving the Shore marine terminal and commercial herring operators could occur resulting in interference or displacement of herring fishing activities.	FSH-5: Shore Terminals shall notify the herring fishery during the herring season of vessel transits. Shore shall also participate in the Pacific herring commercial fishery annual public scoping and hearing process, part of CDFG's annual review of herring commercial fishing regulations. CDFG has the authority to modify or develop regulations to address space use conflicts between the fishery and Shore's operations.	Shore shall demonstrate to CSLC their activities by providing copies of notices.	Reduces the potential damage to the Pacific herring commercial fishery.	CSLC and CDFG	Annual reporting for life of lease.

**Table 8-4 (Continued)**  
**Commercial Fisheries**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>FSH-8:</b> Significant impacts to commercial and sport fisheries in the Bay Estuary would result from oil spill accidents at Shore Terminals or from transiting tankers that service the terminal.	FSH-8a: Implement mitigation measures OS-3 through OS-6 in Operational Safety/Risk of Accidents, and mitigation measures BIO-6b through BIO-6d to lower the probability of oil spills and increase response capability.	See OS-3 through OS-6; BIO-6b through BIO-6d.	See OS-3 through OS-6; BIO-6b through BIO-6d.	See OS-3 through OS-6; BIO-6b through BIO-6d.	See OS-3 through OS-6; BIO-6b through BIO-6d.
	FSH-8b: Post notifications at spill sites and marinas, launch ramps and fishing access points to warn fishing interests of the locations of contaminated sites. Notices shall be written in English and Spanish and be posted in areas most likely to be seen by fishing interests.	CSLC monitor to observe notice postings.	Provides notification to local anglers of potential areas of contamination.	CSLC	Life of lease.
	FSH-8c: Provide financial compensation in accordance with the California Oil Spill Prevention and Response Act.	As per OSPR, to be commensurate with Shore's contribution of impacts.	Helps to fund programs for restoration or compensation.	OSPR	After a spill event, as warranted.
	FSH-8d: Contribute to independent public or private organizations acceptable to the CSLC, who evaluate the effectiveness of mitigation measures (results of the evaluation would be available to public decision-makers to ensure refinement, if necessary, modification of mitigation measures). Evaluation would be done only after an accident and would include monitoring using scientifically accepted protocols.	Shore shall demonstrate to CSLC their participation in relevant programs. Contributions would be determined by the level of impact and cooperation with the various organizations, agencies, and the CSLC.	Helps to develop more effective mitigation measures.	CSLC	Life of lease.

**Table 8-5**  
**Land Use**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>LU-3:</b> Shoreline and water-related uses would be disrupted by oil on the shoreline and in the water and result in significant adverse impacts.	LU-3: Mitigation measures for spills at the Shore terminal would be the responsibility of Shore Terminals operations. Measures applies are those which are presented in other sections (Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries).	Shore shall implement measures presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.	Any residual impacts remaining after first response efforts would be considered to be significant impacts.	As per referenced measures.	As per referenced measures.
<b>LU-4:</b> Oil spills from vessels in transit through the Bay and outer coast could impact shoreline and water-related uses.	LU-4: Shore Terminals shall implement measures OS-8a and OS-8b in Operational Safety/Risk of Upset. Other mitigation measures for accidents in the shipping lanes would not be Shore Terminals responsibility, but would fall to the vessel operator/owner.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.

**Table 8-6**  
**Air Quality**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AQ-5: Tanker pumping, transit, and/or tug combustion emissions could allow for an increase in throughput at the marine terminal. Thus, future operational emissions (both indirect and direct) have the potential to exceed daily and yearly significance thresholds (existing permit limits).	AQ-5: Mitigation should be focused on the use of best available control technology (BACT) available at the time of any expansion of the upland facility. Increased operations would require additional permitting through the BAAQMD, which would set limitations on allowable emissions levels and require offsets as necessary.	Shore shall apply to abide by BAAQMD requirements for revisions to the existing permit or for new permitting.	BAAQMD	At the time of increases in upland tankage capacity.	

**Table 8-7**  
**Visual Resources**

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria <sup>a</sup>	Responsible Agency	Timing
VR-2: Spills would change the color and texture of water and shoreline conditions. The visual impacts of a spill could last for a long period of time, depending on the level of physical impact and cleanup ability.	VR-2: Mitigation measures for oil spill impacts include those measures for contingency planning and response, as presented in Operational Safety/Risk of Upset and Biological Resources.	Shore shall implement measures presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.	The measures provide for enhanced response capability and protection and would help to contain and clean up small spills. Impacts may remain significant depending on the effectiveness of first response containment and clean-up.	As per referenced measures.	As per referenced measures.
VR-3: Spills would change the color and texture of water and shoreline conditions. The level of public sensitivity and expectations of viewers would result in a negative impression of the viewed and result in significant impacts, depending on the various characteristics of a spill and its residual effects.	VR-3: Shore Terminals shall implement measures OS-8a and OS-8b in Operational Safety/Risk of Upset. Other mitigation measures for accidents in the shipping lanes would not be Shore Terminal's responsibility, but would fall to the vessel operator/owner.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.	See OS-8a and OS-8b.

**Table 8-8**  
**Geotechnical Resources/Structural Stability**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>GEO-2:</b> The impact of berth dredging, natural scour or accumulation of soil in steep slopes near or adjacent to wharf piles should be considered in soil-structure interaction. In addition, liquefaction and lateral spreading resulting from any moderate earthquake may create a significant adverse impact.	GEO-2a: In the event that such scour has been noted, then Shore shall conduct additional analysis to evaluate the potential for lateral spreading. Loss of lateral support and laterally induced additional loads should be incorporated into the overall analysis and/or design. This analysis should be conducted concurrently with a site specific liquefaction analysis (see Impact GEO-3).  GEO-2b: Seismic evaluation of the structures and their foundations should be included in the structural analysis and geotechnical investigation in compliance with Section 6 of the proposed MOTEMS. The results and recommendations of the evaluation shall be coordinated with the mooring analysis recommendations and implementation of corrections (see GEO-10).	CSLC monitor to review and approve analysis recommendations and corrections.	Reduces potential for lateral spreading.	CSLC	Within 12 months of lease implementation.
	GEO-3: The site has not had an industry standard liquefaction evaluation performed. As such, the potential for impacts from seismically induced settlement are unknown but potentially significant.	CSLC monitor to review and approve recommendations and corrections.	Reduces potential damage to structure from liquefaction.	CSLC	Within 6 months of lease implementation.

**Table 8-8 (Continued)**  
**Geotechnical Resources/Structural Stability**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-4: Shore operators may not have adequate warning time to allow a vessel to depart from the wharf to avoid damage to the vessel and/or the wharf from a tsunami.	GEO-4a: As soon as possible, after notification of a tsunami, Shore operators shall release the vessel from its mooring and the vessel shall move away from the wharf.  GEO-4b: Shore shall comply with Section 5 of the proposed MOTEMS mooring analysis (see GEO-10).	Shore shall report to CSLC after a tsunami event.  See GEO-10.	Reduces damage to wharf and vessels from tsunami events.	CSLC	After a tsunami event.
GEO-8: During an earthquake damage could occur in the batter pile to bent cap connections and could damage the treble.	GEO-8: Shore shall re-evaluate the loads on the bents, check the batter pile bolted connections, and adopt corrective measures.	Shore shall submit evaluation to CSLC for review, and schedule and implement any required corrections.	Reduces potential for damage due to poor batter pile bolted connections.	CSLC	Within 12 months of lease implementation.
GEO-9: The anchor bent batter pile to bent cap bolts are not capable of transmitting the predicted transverse seismic loads and could fail during an earthquake resulting in a significant adverse impact. The bolted connection in the anchor pile bents could result in loss of support for the petroleum lines and potentially initiate an oil spill.	GEO-9: The loads in the anchor bents should be re-evaluated and batter pile connections checked within 1 year. The anchor bents' inadequacy should be addressed and corrective measures implemented within 2 years.	Inspection by CSLC monitor to approve corrections.	Reduces potential for damage and oil spills.	CSLC	Timing as stated in measure.

**Table 8-8 (Continued)**  
**Geotechnical Resources/Structural Stability**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>GEO-10:</b> The last mooring analysis used data from sites nearby that may not reflect actual wharf conditions. There could be impacts associated with berthing and mooring capacity under actual currents, tides and winds, with the potential for oil releases.	GEO-10a: Shore shall collect 12 months of data on currents, tide levels, and wind speed/direction at the wharf.  GEO-10b: If data analysis shows that currents, tides ad wind speeds are significantly different (as assessed by CSLC) from that assumed in the previous analysis, Shore shall conduct a new mooring analysis consistent with the proposed MOTEMS Section 5 requirements.	Shore shall submit data to CSLC.	Provides knowledge of the conditions proximate to the terminal.	CSLC	Within 12 months of lease implementation.
<b>GEO-11:</b> Pipeline stresses on the 30-inch pipeline in relation to movement of the loading platform and trestle, and on the pipeline expansion loop support interface along the trestle are unknown. The potential may exist for damage to the pipeline and oil leaks.	GEO-11a: Shore shall conduct a pipeline analysis on the 30-inch pipeline and the pipeline loop.	Shore shall submit report to CSLC. Determine with CSLC schedule for any required corrections.	Reduces potential for damage to wharf and vessels.	CSLC	Within 12 months of lease implementation.
	GEO-11b: Shore shall ensure that all pipelines for oil transfer meet MOTEMS and CSLC regulations in CCR Title 2, Division 3, Chapter 1, Article 5.5, Sections 2564 through 2570 for ensuring pipeline integrity.	CSLC to provide oversight by periodic inspections.	Assures pipeline integrity.	CSLC	Life of lease.

**Table 8-9**  
**Environmental Justice**

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
EJ-1: Overall water quality, biological, and commercial and sport fisheries impacts would affect resources used by the entire Bay community, whether or not they are minority or low-income, and would therefore not have a disproportionate impact on a minority of low-income population, except for sport fisheries.	Should an oil spill from Shore Terminals extend beyond .5 mile from the terminal and preclude sport fishing activities for more than two days. Shore Terminals shall contribute either funds or food stuffs to a local food bank in an amount sufficient, as determined in conjunction with the CSLC, to replace food sources that would have been supplied by fishing activities within the affected areas.	Shore shall contribute funds or food stuffs to be determined in conjunction with the CSLC as per the mitigation measure.	Reduces impacts by replacing food sources.	CSLC	After an oil spill.